

INTER-SOCIETY COORDINATING COMMITTEE FOR PRACTITIONER EDUCATION IN GENOMICS (ISCC-PEG)

Proposed Charge, Goals, Activities and Metrics National Human Genome Research Institute (3/11/13 draft)

Charge: To improve genomic literacy of physicians and other practitioners and enhance the practice of genomic medicine (that is, using an individual patient's genomic results in their clinical care) through sharing of educational approaches and joint identification of educational needs.

Purpose: To facilitate interactions among professional societies that will enhance their efforts to increase the understanding and expertise of practitioners in applying genomic results to clinical care. In its start-up phase the ISCC will focus primarily on physicians and dentists, but hopes eventually to engage and collaborate with allied practitioner groups such as nurse practitioners, physician assistants, pharmacists, nurses, and other professionals comprising integrated health care teams.

Relation to professional societies: The ISCC recognizes the primacy of individual societies and specialty boards in defining practice guidelines and certification requirements for their members in all areas of clinical practice. The ISCC's role is thus to support and stimulate the activities of these societies, by offering partnership and available expertise where desired by individual societies. It is not intended to assume direction or primacy, nor in any way to supersede the societies' role in guiding their memberships toward the effective practice of genomic medicine.

Long-term vision: Continued advances in genomic technology will soon make it possible for a substantial proportion of patients to have reliable characterization of their clinically important sequence variants readily available to support routine clinical decision-making. Educational efforts begun now will enable practitioners to retrieve and act upon the currently modest number of variants particularly relevant to a given patient and clinical context, and to respond effectively to targeted information "pushed" to them through decision-support-enabled medical records. Understanding of the role of genomic variation in health and disease, as derived from research, will evolve in parallel with practitioners' knowledge and competence in applying that understanding. Together these advances will increase the rapidity and accuracy of diagnoses as well as the appropriateness and effectiveness of therapy, while minimizing adverse effects and unnecessary testing or intervention.

Sufficient numbers of clinically relevant findings, largely in pharmacogenomics and oncology, have been identified to date to support effective educational efforts in the use of such variants in clinical care. The ISCC proposes to use this initial corpus as a base for societies to introduce their members to use of these findings in clinical care. Incremental evolution in identification of relevant sequence variation will permit gradual expansion of practitioners' knowledge and practice in applying genomics to clinical care.

Overarching Goals:

1. Gather and facilitate dissemination of best practices and resources in genomic education and clinical care.

2. Identify advances in genomic science that will require new educational initiatives.
3. Identify needs of societies and clinicians in filling gaps in evidence and knowledge and providing effective educational efforts.
4. Identify foundational educational needs common across professions and specialties.
5. Seek the optimal educational balance between competencies and basic knowledge.
6. Design short-, medium-, and long-term work plans with initial focus on producing tangible outcomes within the first year.
7. Assist societies in jointly and separately publishing papers of common interest.

Proposed Composition and Meetings

1. One “lead” representative, and others as desired, from participating professional societies and interested NIH Institutes and Centers, appointed to variable terms.
2. Ad hoc content experts to be invited as needed.
3. Co-chaired by a professional society representative and an NIH person.
4. Meet at 6-month intervals with conference calls between meetings.

Funding and Staff Support: Societies will be asked to support the travel of their representatives to ISCC meetings. Similar to NHGRI’S Genomic Medicine Working Group and Genomic Medicine meetings, initial staff support will be provided by NHGRI’s Division of Genomic Medicine (DGM) and Division of Policy, Communications, and Education (DPCE). Initial funding from NHGRI’s RMS budget may be followed by grant or supplement support from related NHGRI activities such as the Genomic Medicine Demonstration Projects or Clinically Relevant Variants Resource.

Specific Activities

1. Review the maturation of genomic sciences from the laboratory to the clinic and bedside, including advances in genotyping and sequencing, improvements in the use of information technologies as an aid in the correct use of these data, and most importantly, determination of when individual test results are sufficiently accurate and useful in patients.
2. Define use cases relevant to specific societies’ members that will facilitate education and uptake.
3. Review, discuss, and disseminate to professional societies the latest findings and reports from resources such as the Clinically Relevant Variants Resource, the NIGMS Pharmacogenomics Knowledge Base, various Food and Drug Administration determinations, and related sources regarding the use of genomics in diagnosis, treatment, and prevention.
4. Commission working groups led by members of the ISCC with content and specialty experts from the professional societies to provide guidance on trans-professional society issues such as pharmacogenomics, credentialing of physicians to order genomic tests, implications of Direct to Consumer genomics in the clinic, consent and ethical issues in clinical genomics, and other matters that would be useful to health care providers.
5. Engage specialty boards and work with them to incorporate genomics into certification exams.
6. Conduct or commission surveys of practitioners to identify educational needs and barriers in genomic medicine and share results across societies; facilitate use of standardized survey instruments across societies to permit pooling of results.

7. Review and disseminate resources to enhance relevant physician competencies such as utilization of genetic counselors, pre-test counseling and consent, selection of a laboratory, ordering of tests and interpreting results, discussions with patients and families, identification and use of physicians with expertise in genomics, and subsequent actions indicated.
8. On request, and in a non-binding manner, review professional society guidelines and other guidance offered to physicians in the use of genomics in prevention, diagnosis and treatment.
9. Develop and disseminate metrics useful in monitoring the success of educational programs in leading to appropriate use of genomic technologies.
10. Provide a venue for sharing effective genomic education plans, materials, and outcomes across professional societies, as well as lessons learned.
11. Collaborate with other provider education groups to standardize approaches, competencies, and knowledge base for all health workers.
12. Work with the Accreditation Council for Graduate Medical Education (ACGME) and the Accreditation Council for Continuing Medical Education (ACCME) to assist both Councils in their programs to support physician education throughout their careers.

Metrics: The ISCC will be a success if inter-society communications are free-flowing, useful, and perhaps more importantly, if there are documented improvements in appropriate use of genomic strategies by physicians. Specific metrics related to genomic medicine education might include:

Process variables:

1. Educational best practices are identified and disseminated.
2. Physician competencies are generated and estimates of use gathered.
3. Professional society guidelines and other guidance documents are reviewed and improved.
4. Society-specific use cases are identified and educational materials developed to address them.
5. The number and diversity of participating professional societies grows.
6. Interactions with other efforts such as the Clinically Relevant Variants Resource, National Coalition for Health Care Provider Education in Genetics (NCHPEG), and other practitioner communities' educational activities are suitably frequent and productive.
7. Interactions on educational activities among societies within the ISCC are also suitably frequent and productive.

Substantive variables:

1. Educational products are positively assessed and increasingly used by practicing physicians.
2. Surveys by professional society members reveal improved knowledge and comfort in using genomics in their practices.
3. Useful papers are published by the Coordinating Committee and the commissioned Working Groups.
4. Genomic medicine content is incorporated into certification examinations at relevant levels of practitioners' training and career paths.
5. ACGME and ACCME report improved educational efforts in resident training and in practicing physicians as measured by improved practice of genomic based medicine.